THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 44

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte YOSHITADA OSHIDA,
TETSUZO TANIMOTO and MINORU TANAKA

Appeal No. 1997-3480
Application 08/315,841

HEARD: FEBRUARY 02, 2000

Before THOMAS, HAIRSTON and JERRY SMITH, Administrative Patent Judges.

JERRY SMITH, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 73, 74, 76-79 and 81-97, which constitute all the claims remaining in the application. The disclosed invention pertains to a method and apparatus for detecting at least an inclination of an optically multilayered object with respect to a predetermined reference plane.

Representative claim 73 is reproduced as follows:

73. A method for detecting at least an inclination of an optically multilayered object with respect to a predetermined plane, comprising the steps of:

irradiating light on the optically multilayered object with an incident angle of not less than about 82 degrees;

detecting at least light reflected from the optically multilayered object; and

obtaining information of the inclination of the optically multilayered object with respect to the predetermined plane from the detected light;

wherein the irradiated light is a linearly polarized

light.

The examiner relies on the following references:

Erickson	3,601,490	Aug. 24, 1971
Uehara et al. (Uehara)	4,558,949	Dec. 17, 1985
Murakami et al. (Murakami)	4,704,020	Nov. 03, 1987
Akamatsu et al. (Akamatsu)	5,162,642 (effectively filed Nov. 18, 1986)	Nov. 10, 1992

Claims 73, 74, 76-79 and 81-97 stand rejected under 35 U.S.C. § 103. As evidence of obviousness the examiner offers Uehara or Murakami in view of Akamatsu with respect to claims 73, 74, 77-79, 81, 84-91 and 95-97, and the examiner adds Erickson with respect to claims 76, 82, 83 and 92-94.

Rather than repeat the arguments of appellants or the examiner, we make reference to the briefs and the answer for the respective details thereof.

OPINION

We have carefully considered the subject matter on appeal, the rejections advanced by the examiner and the evidence of obviousness relied upon by the examiner as support

for the rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellants' arguments set forth in the briefs along with the examiner's rationale in support of the rejections and arguments in rebuttal set forth in the examiner's answer.

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the obviousness of the invention as set forth in claims 73, 74, 76-79 and 81-97 . Accordingly, we reverse.

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been

led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). If that burden is met, the burden then shifts to the applicant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. See Id.; In re Hedges, 783 F.2d 1038, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and In re

Rinehart, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976). Only those arguments actually made by appellants have been considered in this decision. Arguments which appellants could have made but chose not to make in the brief have not been considered [see 37 CFR § 1.192(a)].

With respect to each of the independent claims, the examiner cites Uehara and Murakami as each disclosing a method and apparatus for detecting the inclination of a wafer with respect to a reference plane. The examiner observes that Uehara and Murakami fail to teach the incident angle being not less than 82 degrees (claims 73, 78 and 84) or not less than 85 degrees (claim 82)[answer, page 3]. The examiner cites Akamatsu as teaching a device for detecting the position of a wafer in which the incident angle of light is greater than 80 degrees. The examiner asserts that it would have been obvious to irradiate the objects of Uehara or Murakami at an incidence angle of not less than 82 degrees or not less than 85 degrees based on the teachings of Akamatsu [id., pages 3-4].

Appellants make several arguments that we will consider in turn. Appellants' first argument is that neither Uehara nor Murakami teaches an incident angle of not less than

85 degrees or not less than 82 degrees [brief, page 7]. This argument alone would not be persuasive because the examiner has acknowledged this deficiency in the references and has cited Akamatsu to overcome this deficiency. We agree with the examiner that Akamatsu's teaching of greater than 80 degrees would suggest the claimed angles of not less than 82 degrees or not less than 85 degrees.

Appellants' second argument is that neither Uehara nor Murakami teaches the use of polarized light as recited in the claims. The examiner notes in the answer that Akamatsu teaches the use of polarized light and is relied on to supply this

teaching [answer, pages 5-6]. We agree that polarized light is broadly suggested by Akamatsu.

Appellants' third argument with respect to the independent claims is that Akamatsu is related to height detection rather than inclination detection and the device of Akamatsu eliminates inclination errors as a problem. Appellants argue that there is no motivation to combine the height detection ideas of Akamatsu with the inclination

detection systems of Uehara and Murakami [brief, pages 10-12]. The examiner responds that since appellants' specification notes that appellants' invention detects both inclination and height of an object, the specification is evidence that these two measured properties are related and in the same field of invention [answer, pages 6-7]. Appellants respond that the examiner is improperly using appellants' own specification as prior art against them [reply brief].

We agree with appellants on this point. The only suggestion to combine height measuring systems with inclination angle measuring systems comes from appellants' disclosure. Neither Uehara nor Murakami indicates that the height of the object is of any concern to them. Likewise, the height measuring system of Akamatsu specifically notes that any inclination angle errors are precluded by its system, thus making inclination angle measurements irrelevant in Akamatsu. Therefore, we agree with appellants that the only basis for applying the Akamatsu height measuring angle teachings with the inclination measurement
systems of Uehara or Murakami is based on an improper attempt to reconstruct appellants' invention in hindsight.

Since we agree with appellants that there is no motivation to combine the teachings of Akamatsu with either Uehara or Murakami, the examiner's proposed combination of prior art does not support the examiner's rejection of the claims under 35 U.S.C. § 103.

Although some of the claims are rejected based on the additional teachings of Erickson, we note that Erickson does not overcome the deficiencies in the basic combination of Uehara and Akamatsu or Murakami and Akamatsu. Therefore, the applied prior art fails to support the rejection of any of the claims under 35 U.S.C. § 103. Accordingly, the decision of the examiner rejecting claims 73, 74, 76-79 and 81-97 is reversed.

REVERSED

James D. Thomas Administrative Patent Judge	)
Kenneth W. Hairston Administrative Patent Judge	) BOARD OF PATENT) APPEALS AND) INTERFERENCES
Jerry Smith Administrative Patent Judge	)

JS/dm

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